

## SUS304 Ultrasonic Cleaner Machine 40KHz For Ceramic Filter Membrane

### Our Product Introduction

#### Basic Information

- Place of Origin: China
- Brand Name: SKYMEN
- Certification: CE, RoHs, FCC
- Model Number: JP-11224ST
- Minimum Order Quantity: 1
- Price: Negotiation
- Packaging Details: wooden case
- Delivery Time: In Stock
- Supply Ability: 100 pcs per month



#### Product Specification

- Ultrasonic Power: 61200W
- Heating Power: 69000W
- Power Supply: 380V 3 Phase
- Generator: 34pcs
- Frequency: 28/40KHz Default
- Tank Capacity: SUS304
- Highlight: **SUS304 Ultrasonic Cleaner Machine, Ultrasonic Cleaner Machine 40KHz, Ceramic Filter Membrane Ultrasonic Washer Machine**



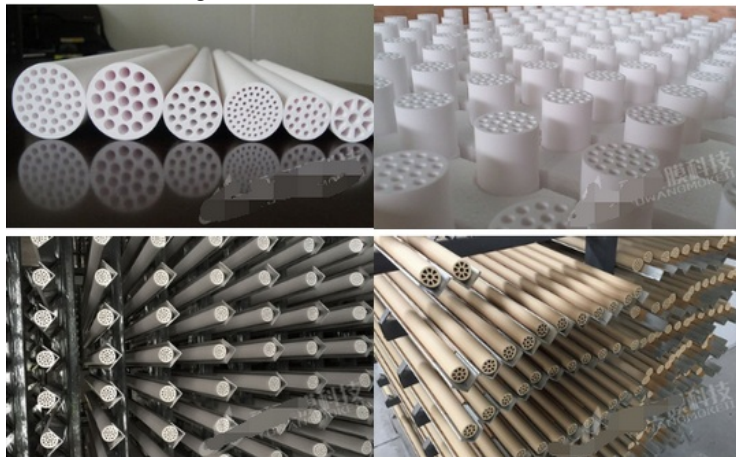
## Product Description

### 10000L Ultrasonic Cleaning Machine For Ceramic Filter Membrane 40KHz

#### Detailed Specification of this machine:

|   |                    |   |   |
|---|--------------------|---|---|
| 1 | Model              | JP-11224ST  |   |
| 2 | Parameter          | Function  | Ultrasonic cleaning                                 |
|   |                    | Ultrasonic Frequency  | 28/40kHz (other frequency can be customized)        |
|   |                    | Tank Material   | SUS 304 (SUS 316 can be customized)                 |
|   |                    | Thickness of tank   | 3mm   |
|   |                    | Inner tank dimension  | 3200*2000*1500mm                                    |
|   |                    | Tank Capacity   | 9600L   |
|   |                    | Transducer  | 1224pcs   |
|   |                    | Ultrasonic Power  | 61200W  |
|   |                    | Heating Power   | 69000W  |
|   |                    | Time setting of Ultrasonic                                  | 0~99 hours  |
|   |                    | Temperature setting   | Room temperature ~ 95°C adjustable                  |
|   |                    | Drain value   | Available   |
|   |                    | Water inlet/outlet  | Available   |
|   |                    | Generator   | 34 sets   |
|   |                    | Generator power control                                     | 1800W   |
|   |                    | Generator shelf   | Available   |
|   |                    | Basket  | Available   |
|   |                    | Basket load   | 4000KG  |
| 3 | Packing            | Overall size  | 370*270*230cm                                       |
|   |                    | Packing size  | 380*280*250cm                                       |
|   |                    | Packing detail  | By wooden case(No logs, free of fumigation)         |
|   |                    | N.W/G.W   | 4000KG/4300KG                                       |
| 4 | Power supply       | 380V 3 phase; 220V 3 pahse; 415V; 600V                      |   |
| 5 | Warranty           | 1 year warranty for spare parts, all life technical support |   |
| 6 | Certificate        | CE, RoHS; FCC, REACH  |   |
| 7 | Lead time          | 20~30 working days after deposit                            |   |
| 7 | Optional functions | Filtration cycle system                                     | Available; capture dirty water, recycle clean water |
|   |                    | Lifting system for basket                                   | Available; take the basket up and down              |
|   |                    | Dunking system  | Available; Speed up cleaning                        |
|   |                    | Bubbling  | Available; need to connect air compressor           |
|   |                    | Electrolysis  | Available; For cleaning more complex structure mold |
|   |                    | Cooling system  | Available; To cool down inflammable and explosive   |
|   |                    | Constant temperature  | Available;  |
|   |                    | Roller barrel   | Available; for clean coins and big quantity parts   |
|   |                    | Anti-explosion electric box                                 | Available;  |
|   |                    | Deionized(DI) water   | Available   |
|   |                    | Double/Multi frequency                                      | Available; 28/40/20/68/80/132KHz                    |
|   |                    | Other funtions  | Negotiate via email                                 |

#### Ultrasonic cleaning of Ceramic Filter Membrane



Other size and capacity for reference:

|                     |  |                  |                     |
|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1216ST  |                  |                     |
| Inner tank size     | 1500*1000*1000mm   | Capacity         | 1500L               |
| Transducer          | 216pcs   | Ultrasonic power | 0~10800W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 36000W              |
| Max power           | 46800W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1288ST  |                  |                     |
| Inner tank size     | 2000*1200*800mm  | Capacity         | 1920L               |
| Transducer          | 288pcs   | Ultrasonic power | 0~14400W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 45000W              |
| Max power           | 59400W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1360ST  |                  |                     |
| Inner tank size     | 2000*1200*1000mm   | Capacity         | 2400L               |
| Transducer          | 360pcs   | Ultrasonic power | 0~18000W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 54000W              |
| Max power           | 72000W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1432ST  |                  |                     |
| Inner tank size     | 2000*1500*1200mm   | Capacity         | 3000L               |
| Transducer          | 432pcs   | Ultrasonic power | 0~21600W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 63000W              |
| Max power           | 84600W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1576ST  |                  |                     |
| Inner tank size     | 2500*1500*1200mm   | Capacity         | 4500L               |
| Transducer          | 576pcs   | Ultrasonic power | 0~28800W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 63000W              |
| Max power           | 91800W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1648ST  |                  |                     |
| Inner tank size     | 3000*1500*1200mm   | Capacity         | 5400L               |
| Transducer          | 648pcs   | Ultrasonic power | 0~32400W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 63000W              |
| Max power           | 95400W   | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |



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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1720ST  |                  |                     |
| Inner tank size     | 4000*1600*1000mm   | Capacity         | 6400L               |
| Transducer          | 720pcs   | Ultrasonic power | 0~36000W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 66000W              |
| Max power           | 102000W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

|                     |  |                  |                     |
|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-1936ST  |                  |                     |
| Inner tank size     | 3500*1600*1300mm   | Capacity         | 7280L               |
| Transducer          | 936pcs   | Ultrasonic power | 0~46800W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 66000W              |
| Max power           | 112800W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

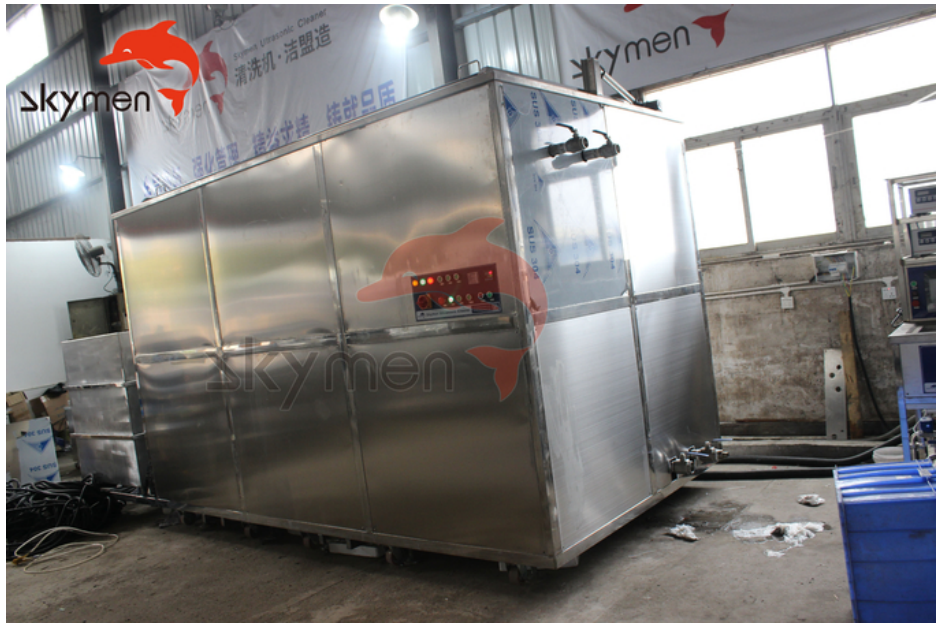
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| Brand               | Skymen   |                  |                     |
| Model               | JP-11152ST   |                  |                     |
| Inner tank size     | 2500*2000*1700mm   | Capacity         | 8500L               |
| Transducer          | 1152pcs  | Ultrasonic power | 0~57600W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 69000W              |
| Max power           | 126600W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

|                     |  |                  |                     |
|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-11224ST   |                  |                     |
| Inner tank size     | 3200*2000*1500mm   | Capacity         | 9600L               |
| Transducer          | 1224pcs  | Ultrasonic power | 0~61200W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 69000W              |
| Max power           | 130200W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

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|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-11368ST   |                  |                     |
| Inner tank size     | 8000*1200*1200mm   | Capacity         | 11520L              |
| Transducer          | 1368pcs  | Ultrasonic power | 0~68400W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 69000W              |
| Max power           | 137400W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

|                     |  |                  |                     |
|---------------------|--|------------------|---------------------|
| Brand               | Skymen   |                  |                     |
| Model               | JP-11512ST   |                  |                     |
| Inner tank size     | 8000*1600*1600mm   | Capacity         | 20480L              |
| Transducer          | 1512pcs  | Ultrasonic power | 0~75600W Adjustable |
| Frequency           | 28/40KHz   | Heating power    | 72000W              |
| Max power           | 147600W  | Power supply     | 380V/220V 3 Phase   |
| Temperature control | Room temperature~95°C  | Time control     | 0~99 Hours          |
| Tank material       | SUS 304  | Tank Thickness   | 3mm                 |
| Water inlet/outlet  | Yes  | Caster           | Yes                 |
| Basket              | Yes  | Manual           | Available           |
| Warranty            | 1 Year, technical support always   |                  |                     |
| Application         | Heat exchanger; Boiler; BBQ grills; Mold, Casting; etc.                          |                  |                     |
| Available functions | Water filtration system; Lifting system for basket; Bubble system; Spraying, etc |                  |                     |

**Product show:**







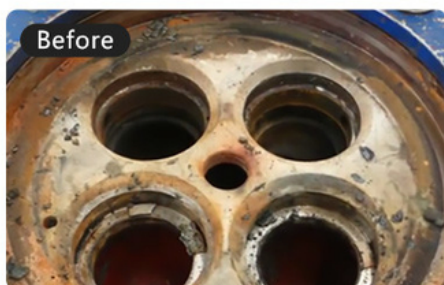
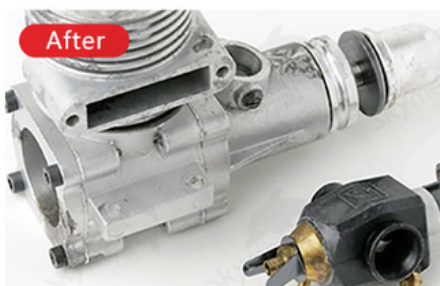
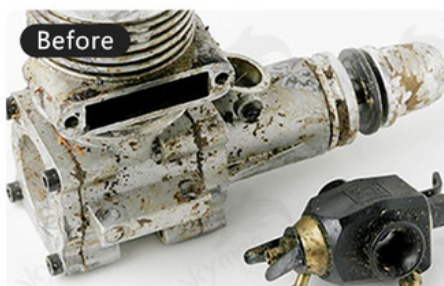
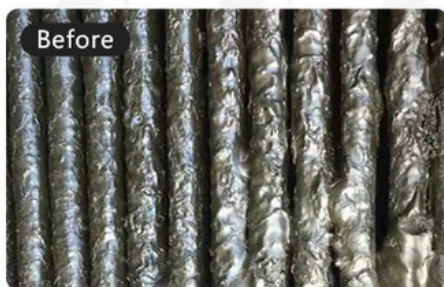




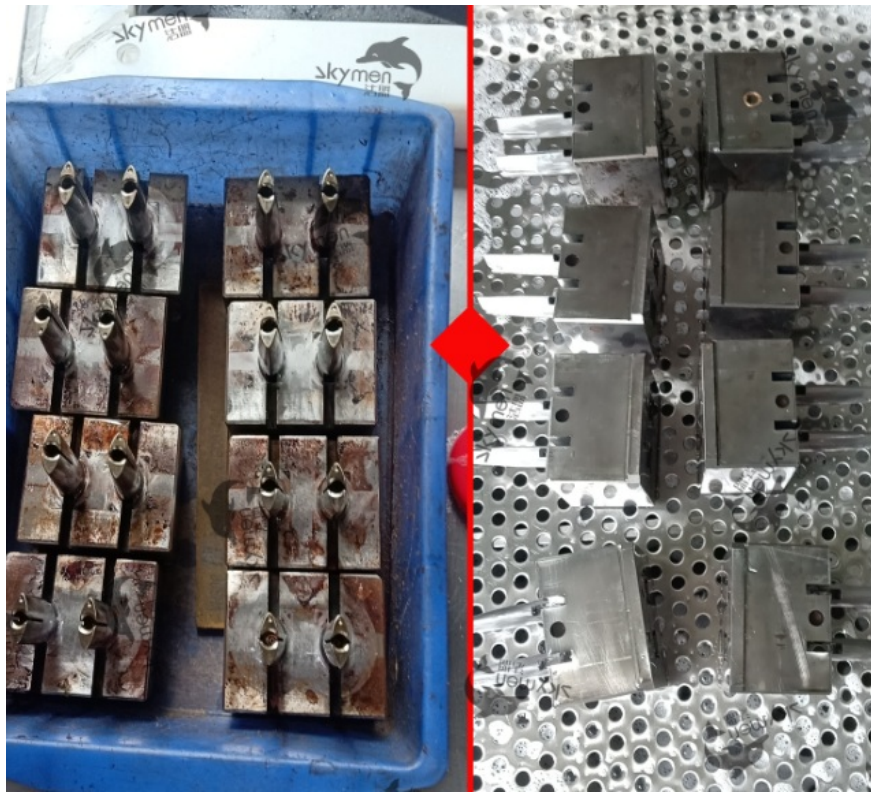
Cleaning effect show:

# CLEANING EFFECT

Better cleaning when cleaning with detergent



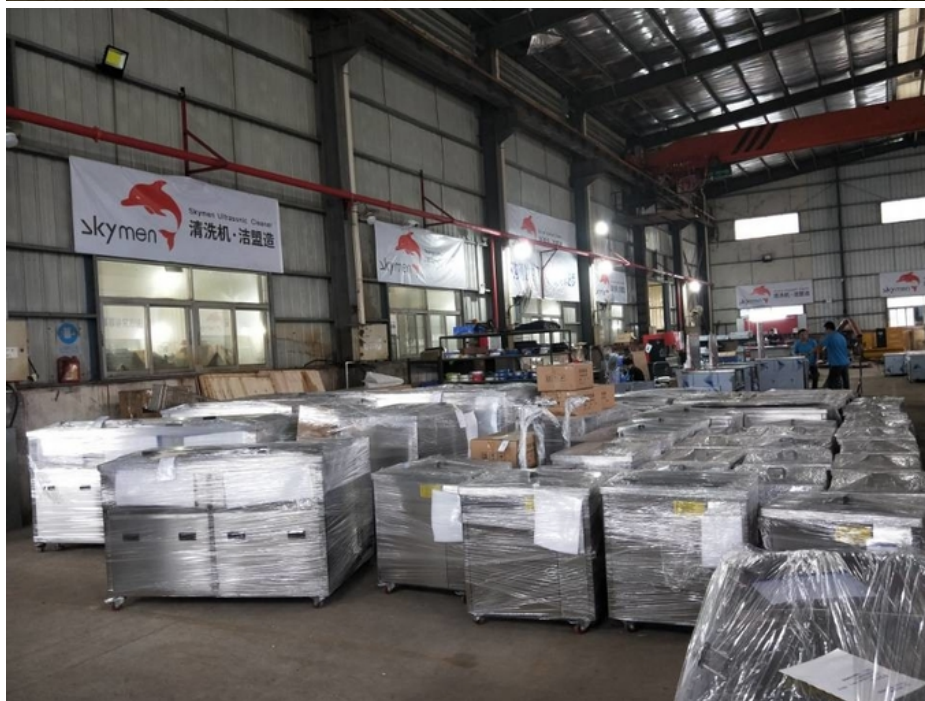




Skymen Cleaning Equipment Shenzhen CO., Ltd.







The physical mechanism of ultrasonic cleaning is mainly ultrasonic cavitation, so to achieve a good cleaning effect, appropriate acoustic parameters and physical and chemical properties of the cleaning agent must be selected.

The higher the sound intensity, the stronger the cavitation. But after the sound intensity reaches a certain value, the cavitation tends to be saturated. If the sound intensity is too high, a large number of bubbles will be generated to increase the scattering attenuation. At the same time, the increase of the sound intensity will increase the nonlinear attenuation and weaken the cleaning effect far away from the sound source.

The higher the frequency, the higher the cavitation threshold, which means that to produce acoustic cavitation, the higher the frequency, the greater the sound intensity required. For example, to produce cavitation in water, the power required at 400kHz is 10 times greater than that at 10kHz. The frequency range generally used is 20-40kHz. The low frequency has high cavitation strength, which is suitable for the occasions where the surface of large cleaning parts and the surface of the cleaning parts have high bonding strength, but it is not easy to penetrate deep holes and parts with complex surface shapes, and the noise is large; higher frequencies have higher cavitation strength Weak, but low noise, suitable for cleaning with more complex surface shapes, slits and dirt and the surface of the cleaning part. Sound field distribution. A stable reverberation field is beneficial to cleaning. If there is a standing wave sound field in the cleaning tank, the cleaning parts cannot be cleaned uniformly due to uneven sound pressure distribution. Therefore, when possible, the geometry of the groove should be chosen to be suitable for establishing a mixed sound field. In addition, dual-frequency, multi-frequency, and frequency sweeping modes can be used to avoid cleaning the "dead zone".

The temperature of the cleaning fluid. As the temperature rises, the surface tension coefficient and viscosity coefficient of the liquid will decrease, so the cavitation threshold will decrease, making cavitation easy to occur; however, due to the temperature rise, the increase in vapor pressure will reduce the cavitation intensity. The preferred temperature of water is 60 degrees Celsius, and different cleaning agents have different optimal temperatures.

Coefficient of viscosity. The liquid with a large viscosity coefficient is difficult to produce cavitation, and the transmission loss is also increased, which is not conducive to cleaning.

Vapor pressure. The vapor pressure is low, the cavitation threshold is high, and there are few cavitation bubbles, but the impact force generated when the cavitation bubbles are closed is large. On the contrary, the high vapor pressure is easy to cavitation, but the cavitation intensity decreases.

Surface Tension. The liquid has high surface tension and high cavitation strength, but it is not easy to produce cavitation. The type of gas contained in the liquid. The greater the specific heat capacity of the gas, the higher the cavitation intensity. Therefore, it is better to use monoatomic gases such as helium, neon and argon than to use diatomic gases such as nitrogen and oxygen.

In addition, when the cleaning liquid is not flowing, it is beneficial to cavitation, but if the cleaning liquid is not filtered and circulated, the dirt will be redeposited on the surface of the cleaning part, so it needs to flow, but it should not flow too fast.



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